

(19) World Intellectual Property Organization  
International Bureau



(43) International Publication Date  
24 July 2003 (24.07.2003)

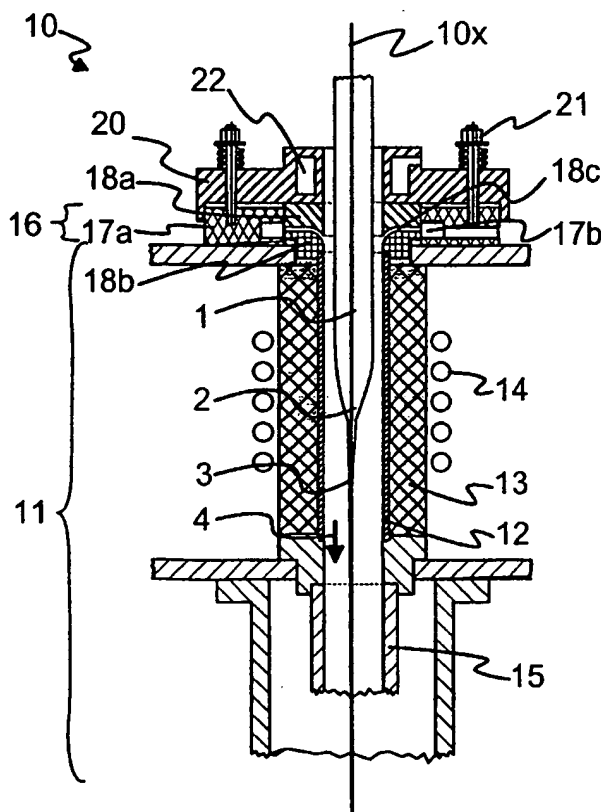
PCT

(10) International Publication Number  
WO 03/059831 A1

- (51) International Patent Classification<sup>7</sup>: C03B 37/029 (74) Agent: TAMPEREEN PATENTTITOIMISTO OY;  
Hermiankatu 12 B, FIN-33720 Tampere (FI).
- (21) International Application Number: PCT/FI03/00020
- (22) International Filing Date: 14 January 2003 (14.01.2003)
- (25) Filing Language: English
- (26) Publication Language: English
- (30) Priority Data: 20020103 18 January 2002 (18.01.2002) FI
- (71) Applicant (for all designated States except US): PHOTO-  
NIUM OY [FI/FI]; Sorronrinne 9, FIN-08500 Lohja as  
(FI).
- (72) Inventor; and
- (75) Inventor/Applicant (for US only): MATTILA, Timo  
[FI/FI]; Iirismäki 9 B, FIN-02230 Espoo (FI).
- (81) Designated States (national): AE, AG, AL, AM, AT (util-  
ity model), AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA,  
CH, CN, CO, CR, CU, CZ (utility model), CZ, DE (util-  
ity model), DE, DK (utility model), DK, DM, DZ, EC, EE  
(utility model), EE, ES, FI (utility model), FI, GB, GD, GE,  
GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ,  
LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN,  
MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SC,  
SD, SE, SG, SK (utility model), SK, SL, TJ, TM, TN, TR,  
TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.
- (84) Designated States (regional): ARIPO patent (GH, GM,  
KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW),  
Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM),  
European patent (AT, BE, BG, CH, CY, CZ, DE, DK, EE,  
ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, SE, SI,

[Continued on next page]

(54) Title: SEALING A FIBER DRAWING FURNACE



(57) Abstract: A drawing furnace (10) or the like for manufacturing optical (3) fiber preferably of a vertical fiber preform (1), which drawing furnace comprises at least a preferably tubular heating element (12) surrounding the fiber preform (1) for heating the fiber preform, an outside insulating layer (13) of the heating element (12), a frame part (11) of the drawing furnace in order to place said heating element (12) and said insulating layer (13) in the drawing furnace (10), and a cover part (20) in order to close the area between said heating element (12) and said frame part (11) to insulate the insulating layer (13) from the gas flow (4) surrounding the fiber preform. A gas tube (16) is fitted between the cover part (20) of the drawing furnace (10) and the heating element (12) in order to feed gas to the gas space surrounding the fiber preform, and the cover part (20) is still fitted mobile in relation to the frame (11) when the length of the heating element (12) changes in such a manner, that a force, which is substantially constant and seals the gas tube to the end of the heating element, is directed at said gas tube in all modes of operation of the drawing furnace (10).